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### LISTING OF THE CLAIMS

- 1                   1. (Original) A method for controlling echoes within a
- 2     telecommunication switching system having a plurality of local exchange
- 3     carriers and a plurality of local telecommunication switches where each of
- 4     the plurality of local exchange carriers is connected to a plurality of
- 5     telephone sets attached to a plurality of local telephone switching offices
- 6     of each of the plurality of local exchange carriers and each of the plurality
- 7     of local telecommunication switches is connected to a plurality of
- 8     telephone sets, comprising the steps of:
- 9                   receiving by one of the plurality of local telecommunication
- 10    switches a call setup message from one of a first plurality of telephone
- 11    sets connected to one of a first plurality of local exchange carriers with a
- 12    first trunk circuit interconnecting the one of the plurality of local
- 13    telecommunication switches with the one of the first plurality of local
- 14    exchange carriers;
- 15                  determining by the one of the plurality of local
- 16    telecommunication switches that the call setup message designates one
- 17    of a second plurality of telephone sets connected to one of a second
- 18    plurality of local exchange carriers as a destination of the call setup
- 19    message;
- 20                  determining by the one of the plurality of local
- 21    telecommunication switches in response to the call setup message that a
- 22    first one of a first plurality of local telephone switching offices of the one of
- 23    the first plurality of local exchange carriers to which the one of the first
- 24    plurality of telephone sets is connected requires echo cancellation
- 25    operations; and

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26 providing by the one of the plurality of local telecommunication  
27 switches in response to the determination that echo cancellation  
28 operations are required for the first one of the first plurality of local  
29 telephone switching offices echo cancellation operations for a first call  
30 path from the one of the plurality of local telecommunication switches to  
31 the first one of the first plurality of the local telephone switching offices of  
32 the first one of the plurality of local exchange carriers.

1 2. (Original) The method of claim 1 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the first trunk circuit with respect to an echo tail length for  
4 the first call path.

1 3. (Original) The method of claim 1 wherein the step of  
2 providing comprises the steps of verifying that the first trunk circuit has  
3 echo cancellation capabilities;  
4 activating the first trunk circuit to provide echo cancellation  
5 operations on the first call path.

1 4. (Original) The method of claim 3 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the first trunk circuit with respect to an echo tail length for  
4 the first call path.

1 5. (Original) The method of claim 1 wherein the one of the  
2 plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit, a second trunk circuit, and a third  
4 trunk circuit are connected where the third trunk circuit is part of a second  
5 call path from the one of the plurality of local telecommunication switches  
6 to the first one of the second plurality of local telephone switching offices  
7 of the one of the second plurality of local exchange carriers and the step

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8 of providing comprises the steps of verifying that the second trunk circuit  
9 has echo cancellation capabilities;  
10 establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network, second trunk circuit,  
12 switching network and third trunk circuit; and  
13 enabling the second trunk circuit to provide echo cancellation  
14 operations on audio information coming from the third trunk circuit.

1 6. (Original) The method of claim 5 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the second trunk circuit with respect to an echo tail length  
4 for the second call path.

1 7. (Original) The method of claim 1 wherein the one of the  
2 plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit and a second trunk circuit are  
4 connected where the second trunk circuit is part of a second call path from  
5 the one of the plurality of local telecommunication switches to the first one  
6 of the second plurality of local telephone switching offices of the one of the  
7 second plurality of local exchange carriers and the step of providing  
8 comprises the steps of verifying that the second trunk circuit has echo  
9 cancellation capabilities;  
10 establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network and second trunk  
12 circuit; and  
13 enabling the second trunk circuit to provide echo cancellation  
14 operations on audio information coming from the first trunk circuit.

1 8. (Original) The method of claim 7 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation

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3 capabilities of the first trunk circuit with respect to an echo tail length for  
4 the first call path.

1           9. (Original) The method of claim 1 wherein the one of the  
2 plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit, a second trunk circuit, and a third  
4 trunk circuit are connected where the third trunk circuit is part of a second  
5 call path from the one of the plurality of local telecommunication switches  
6 to the first one of the second plurality of local telephone switching offices  
7 of the one of the second plurality of local exchange carriers and the step  
8 of providing comprises the steps of verifying that the second trunk circuit  
9 has echo cancellation capabilities;  
10           establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network, second trunk circuit,  
12 switching network and third trunk circuit;  
13           enabling the second trunk circuit to provide echo cancellation  
14 operations on audio information coming from the first trunk circuit;  
15           determining by the one of the plurality of local  
16 telecommunication switches in response to the call setup message that a  
17 first one of the plurality of local telephone switching offices of the one of  
18 the second plurality of local exchange carriers to which the one of the  
19 second plurality of telephone sets is connected requires echo cancellation  
20 operations; and  
21           enabling the third trunk circuit to provide echo cancellation  
22 operations on audio information coming from the second call path.

1           10. (Original) The method of claim 9 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the third trunk circuit with respect to an echo tail length for  
4 the second call path.

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1           11. (Original) The method of claim 1 wherein the one of the  
2 plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit and a second trunk circuit are  
4 connected where the second trunk circuit is part of a second call path from  
5 the one of the plurality of local telecommunication switches to the first one  
6 of the second plurality of local telephone switching offices of the one of the  
7 second plurality of local exchange carriers and the step of providing  
8 comprises the steps of verifying that the second trunk circuit has echo  
9 cancellation capabilities;  
10           establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network, and second trunk  
12 circuit;  
13           enabling the first trunk circuit to provide echo cancellation  
14 operations on audio information coming from the first call path;  
15           determining by the one of the plurality of local  
16 telecommunication switches in response to the call setup message that  
17 the first one of the second plurality of local telephone switching offices of  
18 the one of the second plurality of local exchange carriers to which the one  
19 of the second plurality of telephone sets is connected requires echo  
20 cancellation operations; and  
21           enabling the second trunk circuit to provide echo cancellation  
22 operations on audio information coming from the second call path.

1           12. (Original) The method of claim 11 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the second trunk circuit with respect to an echo tail length  
4 for the second call path.

1           13. (Original) A method for controlling echoes within a  
2 telecommunication switching system having a plurality of local exchange

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3 carriers, and a plurality of local telecommunication switches where each of  
4 the plurality of local exchange carriers is connected to a plurality of  
5 telephone sets attached to a plurality of local telephone switching offices  
6 of each of the plurality of local exchange carriers and each of the plurality  
7 of local telecommunication switches is connected to a plurality of  
8 telephone sets and a first and second ones of the plurality of local  
9 telecommunication switches interconnected by a third plurality of local  
10 exchange carriers, comprising the steps of:  
11 receiving by one of the plurality of local telecommunication  
12 switches a call setup message from one of a first plurality of telephone  
13 sets connected to one of a first plurality of local exchange carriers via the  
14 third plurality of local exchange carriers and the second one of the plurality  
15 of local telecommunication switches and a first trunk circuit  
16 interconnecting the first one of the plurality of local telecommunication  
17 switches with the third one of the plurality of local exchange carriers;  
18 determining by the first one of the plurality of local  
19 telecommunication switches that the call setup message designates one  
20 of a second plurality of telephone sets connected to one of a second  
21 plurality of local telephone switching offices of one of a second plurality of  
22 local exchange carriers as a destination of the call setup message;  
23 determining by the first one of the plurality of local  
24 telecommunication switches in response to the call setup message that a  
25 first one of a first plurality of local telephone switching offices of the one of  
26 the first plurality of local exchange carriers to which the one of the first  
27 plurality of telephone sets is connected requires echo cancellation  
28 operations; and  
29 providing by the first one of the plurality of local  
30 telecommunication switches in response to the determination that echo  
31 cancellation operations are required for the first one of the first plurality of  
32 local telephone switching offices echo cancellation operations for a first

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33 call path from the first one of the plurality of local telecommunication  
34 switches to the first one of the first plurality of the local telephone  
35 switching offices of the first one of the plurality of local exchange carriers.

1 14. (Original) The method of claim 13 wherein the step of  
2 providing comprises the steps of verifying that the first trunk circuit has  
3 echo cancellation capabilities;  
4 activating the first trunk circuit to provide echo cancellation  
5 operations on the first call path.

1 15. (Original) The method of claim 14 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the first trunk circuit with respect to an echo tail length for  
4 the first call path.

1 16. (Original) The method of claim 13 wherein the first one of  
2 the plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit, a second trunk circuit, and a third  
4 trunk circuit are connected where the third trunk circuit is part of a second  
5 call path from the first one of the plurality of local telecommunication  
6 switches to the first one of the second plurality of local telephone switching  
7 offices of the one of the second plurality of local exchange carriers and the  
8 step of providing comprises the steps of verifying that the second trunk  
9 circuit has echo cancellation capabilities;  
10 establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network, second trunk circuit,  
12 switching network and third trunk circuit; and  
13 enabling the second trunk circuit to provide echo cancellation  
14 operations on audio information coming from the first trunk circuit.

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1                   17. (Original) The method of claim 13 wherein the first one of  
2 the plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit and a second trunk circuit are  
4 connected where the second trunk circuit is part of a second call path from  
5 the first one of the plurality of local telecommunication switches to the first  
6 one of the second plurality of local telephone switching offices of the one  
7 of the second plurality of local exchange carriers and the step of providing  
8 comprises the steps of verifying that the second trunk circuit has echo  
9 cancellation capabilities;  
10                   establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network and second trunk  
12 circuit; and  
13                   enabling the second trunk circuit to provide echo cancellation  
14 operations on audio information coming from the first trunk circuit.

1                   18. (Original) The method of claim 13 wherein the first one of  
2 the plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit, a second trunk circuit, and a third  
4 trunk circuit are connected where the third trunk circuit is part of a second  
5 call path from the first one of the plurality of local telecommunication  
6 switches to the first one of the second plurality of local telephone switching  
7 offices of the one of the second plurality of local exchange carriers and the  
8 step of providing comprises the steps of verifying that the second trunk  
9 circuit has echo cancellation capabilities;  
10                   establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network, second trunk circuit,  
12 switching network and third trunk circuit;  
13                   enabling the second trunk circuit to provide echo cancellation  
14 operations on audio information coming from the first trunk circuit;



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15                   determining by the first one of the plurality of local  
16 telecommunication switches in response to the call setup message that a  
17 first one of the second plurality of local telephone switching offices of the  
18 one of the second plurality of local exchange carriers to which the one of  
19 the second plurality of telephone sets is connected requires echo  
20 cancellation operations; and  
21                   enabling the third trunk circuit to provide echo cancellation  
22 operations on audio information coming from the second call path.

1                   19. (Original) The method of claim 13 wherein the first one of  
2 the plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit and a second trunk circuit are  
4 connected where the second trunk circuit is part of a second call path from  
5 the first one of the plurality of local telecommunication switches to the first  
6 one of the second plurality of local telephone switching offices of the one  
7 of the second plurality of local exchange carriers and the step of providing  
8 comprises the steps of verifying that the second trunk circuit has echo  
9 cancellation capabilities;  
10                   establishing an internal path from the first and second call  
11 paths through the first trunk circuit, switching network, and second trunk  
12 circuit;  
13                   enabling the first trunk circuit to provide echo cancellation  
14 operations on audio information coming from the first call path;  
15                   determining by the first one of the plurality of local  
16 telecommunication switches in response to the call setup message that  
17 the first one of the second plurality of local telephone switching offices of  
18 the one of the second plurality of local exchange carriers to which the one  
19 of the second plurality of telephone sets is connected requires echo  
20 cancellation operations; and

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21 enabling the second trunk circuit to provide echo cancellation  
22 operations on audio information coming from the second call path.

1 20. (Original) A method for controlling echoes within a  
2 telecommunication switching system having a plurality of local exchange  
3 carriers, a wide area network, pluralities of softphones, a plurality of  
4 remote switches, and a plurality of local telecommunication switches  
5 where each of the plurality of local exchange carriers is connected to a  
6 plurality of telephone sets attached to a plurality of local telephone  
7 switching offices of each of the plurality of local exchange carriers and  
8 each of the plurality of local telecommunication switches is connected to a  
9 plurality of telephone sets and each of the plurality of remote switches is  
10 connected to a first plurality of softphones, comprising the steps of:  
11 connecting the plurality of remote switches to each of the  
12 plurality of local telecommunication switches via the wide area network;  
13 providing echo cancellation circuits in each of the plurality of  
14 remote switches with each echo cancellation circuit having an echo tail  
15 length adjusted to eliminate an echo produced by each of the first plurality  
16 of softphones;  
17 connecting each of a second plurality of softphones to each of  
18 the plurality of local telecommunication switches via the wide area  
19 network;  
20 providing an echo cancellation circuit in each of the second  
21 plurality of softphones having an echo tail length adjusted to eliminate an  
22 echo produced by each of the second plurality of softphones;  
23 connecting one of the plurality of local exchange carriers to the  
24 wide area network via one of the plurality of local telecommunication  
25 switches with the one of the plurality of local exchange carriers  
26 interconnected to the one of the plurality of local telecommunication

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27 switches by a plurality of trunk circuits in the one of the plurality of local  
28 telecommunication switches; and  
29 providing echo cancellation operations in each of the plurality of  
30 trunk circuits adjusted to eliminate echoes produced by the one of the  
31 plurality of local exchange carriers on an individual call path basis.

1 21. (Original) The method of claim 20 wherein the step of  
2 providing echo cancellation operation in each of the plurality of trunk  
3 circuits comprises the steps of determining by the one of the plurality of  
4 local telecommunication switches that a call setup message received from  
5 the one of the plurality of local exchange carriers via one of the plurality of  
6 trunk circuits designates one of the first plurality of softphones connected  
7 to the one of the plurality of the local exchange carriers;  
8 determining by the one of the plurality of local  
9 telecommunication switches in response to the call setup message that a  
10 first one of a plurality of local telephone switching offices of the one of the  
11 first plurality of local exchange carriers to which the one of the plurality of  
12 telephone sets is connected requires echo cancellation operations; and  
13 enabling the one of the plurality of trunk circuits to provide an  
14 echo cancellation operation for a telephone call associated with the call  
15 setup message.

1 22. (Original) The method of claim 21 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the one of the plurality of trunk circuits with respect to an  
4 echo tail length for the first call path.

1 23. (Original) The method of claim 22 wherein the one of the  
2 plurality of local telecommunication switches is connected to the wide area  
3 network by a Internet Protocol trunk circuit and the step of providing the

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4 echo cancellation operation further comprises providing an additional echo  
5 cancellation operation in the Internet Protocol trunk circuit.

1           24. (Original) The method of claim 20 wherein the one of the  
2 plurality of local telecommunication switches is connected to the wide area  
3 network by a Internet Protocol trunk circuit and the step of providing echo  
4 cancellation operation in the Internet Protocol trunk circuit comprises the  
5 steps of determining by the one of the plurality of local telecommunication  
6 switches that a call setup message received from the one of the plurality  
7 of local exchange carriers via one of the plurality of trunk circuits  
8 designates one of the first plurality of softphones connected to the one of  
9 the plurality of the local exchange carriers;  
10           determining by the one of the plurality of local  
11 telecommunication switches in response to the call setup message that a  
12 first one of a plurality of local telephone switching offices of the one of the  
13 first plurality of local exchange carriers to which the one of the plurality of  
14 telephone sets is connected requires echo cancellation operations; and  
15           enabling the Internet Protocol trunk circuit to provide an echo  
16 cancellation operation for a telephone call associated with the call setup  
17 message.

1           25. (Original) The method of claim 24 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail  
4 length for the first call path.

1           26. (Original) The method of claim 25 wherein the step of  
2 providing the echo cancellation operation further comprises providing an  
3 additional echo cancellation operation in the one of the plurality of trunk  
4 circuits.

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1           27. (Original) The method of claim 26 wherein the step of  
2 further providing comprises the step of adjusting the echo cancellation  
3 capabilities of the one of the plurality of trunk circuits.

1           28. (Original) The method of claim 20 wherein the one of the  
2 plurality of local telecommunication switches is connected to the wide area  
3 network by a Internet Protocol trunk circuit and the step of providing echo  
4 cancellation operation in the Internet Protocol trunk circuit comprises the  
5 steps of further determining by the one of the plurality of local  
6 telecommunication switches that another call setup message received  
7 from the one of the plurality of local exchange carriers via one of the  
8 plurality of trunk circuits designates one of the second plurality of  
9 softphones connected to the one of the plurality of the local exchange  
10 carriers;

11           determining by the one of the plurality of local  
12 telecommunication switches in response to the call setup message that a  
13 first one of a plurality of local telephone switching offices of the one of the  
14 first plurality of local exchange carriers to which the one of the plurality of  
15 telephone sets is connected requires echo cancellation operations; and  
16           enabling the Internet Protocol trunk circuit to provide an echo  
17 cancellation operation for a telephone call associated with the other call  
18 setup message.

1           29. (Original) The method of claim 28 wherein the step of  
2 providing comprises the step of adjusting the echo cancellation  
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail  
4 length for the first call path.

1           30. (Original) The method of claim 29 wherein the step of  
2 providing the echo cancellation operation further comprises providing an

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3 additional echo cancellation operation in the one of the plurality of trunk  
4 circuits.

1 31. (Original) The method of claim 30 wherein the step of  
2 further providing comprises the step of adjusting the echo cancellation  
3 capabilities of the one of the plurality of trunk circuits.

1 32. (Original) An apparatus for controlling echoes within a  
2 telecommunication switching system having a plurality of local exchange  
3 carriers and a plurality of local telecommunication switches where each of  
4 the plurality of local exchange carriers is connected to a plurality of  
5 telephone sets attached to a plurality of local telephone switching offices  
6 of each of the plurality of local exchange carriers and each of the plurality  
7 of local telecommunication switches is connected to a plurality of  
8 telephone sets, comprising:

9 means for receiving by one of the plurality of local  
10 telecommunication switches a call setup message from one of a first  
11 plurality of telephone sets connected to one of a first plurality of local  
12 exchange carriers with a first trunk circuit interconnecting the one of the  
13 plurality of local telecommunication switches with the one of the first  
14 plurality of local exchange carriers;

15 means for determining by the one of the plurality of local  
16 telecommunication switches that the call setup message designates one  
17 of a second plurality of telephone sets connected to one of a second  
18 plurality of local exchange carriers as a destination of the call setup  
19 message;

20 means for determining by the one of the plurality of local  
21 telecommunication switches in response to the call setup message that a  
22 first one of a first plurality of local telephone switching offices of the one of  
23 the first plurality of local exchange carriers to which the one of the first

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24 plurality of telephone sets is connected requires echo cancellation  
25 operations; and  
26 means for providing by the one of the plurality of local  
27 telecommunication switches in response to the determination that echo  
28 cancellation operations are required for the first one of the first plurality of  
29 local telephone switching offices echo cancellation operations for a first  
30 call path from the one of the plurality of local telecommunication switches  
31 to the first one of the first plurality of the local telephone switching offices  
32 of the first one of the plurality of local exchange carriers.

1 33. (Original) The apparatus of claim 32 wherein the means  
2 for providing comprises means for adjusting the echo cancellation  
3 capabilities of the first trunk circuit with respect to an echo tail length for  
4 the first call path.

1 34. (Original) The apparatus of claim 32 wherein the means  
2 for providing comprises means for verifying that the first trunk circuit has  
3 echo cancellation capabilities;  
4 means for activating the first trunk circuit to provide echo  
5 cancellation operations on the first call path.

1 35. (Original) The apparatus of claim 34 wherein the means  
2 for providing comprises means for adjusting the echo cancellation  
3 capabilities of the first trunk circuit with respect to an echo tail length for  
4 the first call path.

1 36. (Original) The apparatus of claim 32 wherein the one of  
2 the plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit, a second trunk circuit, and a third  
4 trunk circuit are connected where the third trunk circuit is part of a second

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5 call path from the one of the plurality of local telecommunication switches  
6 to the first one of the second plurality of local telephone switching offices  
7 of the one of the second plurality of local exchange carriers and the  
8 means for providing comprises means for verifying that the second trunk  
9 circuit has echo cancellation capabilities;  
10 means for establishing an internal path from the first and  
11 second call paths through the first trunk circuit, switching network, second  
12 trunk circuit, switching network and third trunk circuit; and  
13 means for enabling the second trunk circuit to provide echo  
14 cancellation operations on audio information coming from the third trunk  
15 circuit.

1 37. (Original) The apparatus of claim 36 wherein the means  
2 for providing comprises means for adjusting the echo cancellation  
3 capabilities of the second trunk circuit with respect to an echo tail length  
4 for the second call path.

1 38. (Original) The apparatus of claim 32 wherein the one of  
2 the plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit and a second trunk circuit are  
4 connected where the second trunk circuit is part of a second call path from  
5 the one of the plurality of local telecommunication switches to the first one  
6 of the second plurality of local telephone switching offices of the one of the  
7 second plurality of local exchange carriers and the means for providing  
8 comprises means for verifying that the second trunk circuit has echo  
9 cancellation capabilities;  
10 means for establishing an internal path from the first and  
11 second call paths through the first trunk circuit, switching network and  
12 second trunk circuit; and



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13 means for enabling the second trunk circuit to provide echo  
14 cancellation operations on audio information coming from the first trunk  
15 circuit.

1 39. (Original) The apparatus of claim 38 wherein the means  
2 for providing comprises means for adjusting the echo cancellation  
3 capabilities of the first trunk circuit with respect to an echo tail length for  
4 the first call path.

1 40. (Original) The apparatus of claim 32 wherein the one of  
2 the plurality of local telecommunication switches comprises a switching  
3 network to which the first trunk circuit, a second trunk circuit, and a third  
4 trunk circuit are connected where the third trunk circuit is part of a second  
5 call path from the one of the plurality of local telecommunication switches  
6 to the first one of the second plurality of local telephone switching offices  
7 of the one of the second plurality of local exchange carriers and the  
8 means for providing comprises means for verifying that the second trunk  
9 circuit has echo cancellation capabilities;

10 means for establishing an internal path from the first and  
11 second call paths through the first trunk circuit, switching network, second  
12 trunk circuit, switching network and third trunk circuit;

13 means for enabling the second trunk circuit to provide echo  
14 cancellation operations on audio information coming from the first trunk  
15 circuit;

16 means for determining by the one of the plurality of local  
17 telecommunication switches in response to the call setup message that a  
18 first one of the plurality of local telephone switching offices of the one of  
19 the second plurality of local exchange carriers to which the one of the  
20 second plurality of telephone sets is connected requires echo cancellation  
21 operations; and

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22 means for enabling the third trunk circuit to provide echo  
23 cancellation operations on audio information coming from the second call  
24 path.

1 41. (Original) The apparatus of claim 40 wherein the means  
2 for providing comprises means for adjusting the echo cancellation  
3 capabilities of the third trunk circuit with respect to an echo tail length for  
4 the second call path.

1 42. (Original) An apparatus for controlling echoes within a  
2 telecommunication switching system having a plurality of local exchange  
3 carriers, a wide area network, pluralities of softphones, a plurality of  
4 remote switches, and a plurality of local telecommunication switches  
5 where each of the plurality of local exchange carriers is connected to a  
6 plurality of telephone sets attached to a plurality of local telephone  
7 switching offices of each of the plurality of local exchange carriers and  
8 each of the plurality of local telecommunication switches is connected to a  
9 plurality of telephone sets and each of the plurality of remote switches is  
10 connected to a first plurality of softphones, comprising:  
11 means for connecting the plurality of remote switches to each  
12 of the plurality of local telecommunication switches via the wide area  
13 network;  
14 means for providing echo cancellation circuits in each of the  
15 plurality of remote switches with each echo cancellation circuit having an  
16 echo tail length adjusted to eliminate an echo produced by each of the first  
17 plurality of softphones;  
18 means for connecting each of a second plurality of softphones  
19 to each of the plurality of local telecommunication switches via the wide  
20 area network;

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21 means for providing an echo cancellation circuit in each of the  
22 second plurality of softphones having an echo tail length adjusted to  
23 eliminate an echo produced by each of the second plurality of softphones;

24 means for connecting one of the plurality of local exchange  
25 carriers to the wide area network via one of the plurality of local  
26 telecommunication switches with the one of the plurality of local exchange  
27 carriers interconnected to the one of the plurality of local  
28 telecommunication switches by a plurality of trunk circuits in the one of the  
29 plurality of local telecommunication switches; and

30 means for providing echo cancellation operations in each of the  
31 plurality of trunk circuits adjusted to eliminate echoes produced by the one  
32 of the plurality of local exchange carriers on an individual call path basis.

1 43. (Original) The apparatus of claim 42 wherein the means  
2 for providing echo cancellation operation in each of the plurality of trunk  
3 circuits comprises means for determining by the one of the plurality of  
4 local telecommunication switches that a call setup message received from  
5 the one of the plurality of local exchange carriers via one of the plurality of  
6 trunk circuits designates one of the first plurality of softphones connected  
7 to the one of the plurality of the local exchange carriers;

8 means for determining by the one of the plurality of local  
9 telecommunication switches in response to the call setup message that a  
10 first one of a plurality of local telephone switching offices of the one of the  
11 first plurality of local exchange carriers to which the one of the plurality of  
12 telephone sets is connected requires echo cancellation operations; and

13 means for enabling the one of the plurality of trunk circuits to  
14 provide an echo cancellation operation for a telephone call associated with  
15 the call setup message.

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1           44. (Original) The apparatus of claim 43 wherein the means  
2   for providing comprises means for adjusting the echo cancellation  
3   capabilities of the one of the plurality of trunk circuits with respect to an  
4   echo tail length for the first call path.

1           45. (Original) The apparatus of claim 44 wherein the one of  
2   the plurality of local telecommunication switches is connected to the wide  
3   area network by a Internet Protocol trunk circuit and the means for  
4   providing the echo cancellation operation further comprises providing an  
5   additional echo cancellation operation in the Internet Protocol trunk circuit.

1           46. (Original) The apparatus of claim 42 wherein the one of  
2   the plurality of local telecommunication switches is connected to the wide  
3   area network by a Internet Protocol trunk circuit and the means for  
4   providing echo cancellation operation in the Internet Protocol trunk circuit  
5   comprises means for determining by the one of the plurality of local  
6   telecommunication switches that a call setup message received from the  
7   one of the plurality of local exchange carriers via one of the plurality of  
8   trunk circuits designates one of the first plurality of softphones connected  
9   to the one of the plurality of the local exchange carriers;  
10           means for determining by the one of the plurality of local  
11   telecommunication switches in response to the call setup message that a  
12   first one of a plurality of local telephone switching offices of the one of the  
13   first plurality of local exchange carriers to which the one of the plurality of  
14   telephone sets is connected requires echo cancellation operations; and  
15           means for enabling the Internet Protocol trunk circuit to provide  
16   an echo cancellation operation for a telephone call associated with the call  
17   setup message.

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1           47. (Original) The apparatus of claim 46 wherein the means  
2 for providing comprises means for adjusting the echo cancellation  
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail  
4 length for the first call path.

1           48. (Original) The apparatus of claim 47 wherein the means  
2 for providing the echo cancellation operation further comprises providing  
3 an additional echo cancellation operation in the one of the plurality of trunk  
4 circuits.

1           49. (Original) The apparatus of claim 48 wherein the means  
2 for providing comprises further adjusting the echo cancellation capabilities  
3 of the one of the plurality of trunk circuits.

1           50. (Original) The apparatus of claim 42 wherein the one of  
2 the plurality of local telecommunication switches is connected to the wide  
3 area network by a Internet Protocol trunk circuit and the means for  
4 providing echo cancellation operation in the Internet Protocol trunk circuit  
5 comprises means for further determining by the one of the plurality of local  
6 telecommunication switches that another call setup message received  
7 from the one of the plurality of local exchange carriers via one of the  
8 plurality of trunk circuits designates one of the second plurality of  
9 softphones connected to the one of the plurality of the local exchange  
10 carriers;

11           means for determining by the one of the plurality of local  
12 telecommunication switches in response to the call setup message that a  
13 first one of a plurality of local telephone switching offices of the one of the  
14 first plurality of local exchange carriers to which the one of the plurality of  
15 telephone sets is connected requires echo cancellation operations; and

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16 means for enabling the Internet Protocol trunk circuit to provide  
17 an echo cancellation operation for a telephone call associated with the  
18 other call setup message.

1 51. (Original) The apparatus of claim 50 wherein the means  
2 for providing comprises means for adjusting the echo cancellation  
3 capabilities of the Internet Protocol trunk circuit with respect to an echo tail  
4 length for the first call path.

1 52. (Original) The apparatus of claim 51 wherein the means  
2 for providing the echo cancellation operation further comprises providing  
3 an additional echo cancellation operation in the one of the plurality of trunk  
4 circuits.

1 53. (Original) The apparatus of claim 52 wherein the means  
2 for providing comprises further adjusting the echo cancellation capabilities  
3 of the one of the plurality of trunk circuits.